

EROSION CONTROL ON VAN SAUN MILL BROOK

HUC-14 Code # 02030103180010

WMA5 Northeast Region

Funds Requested: \$100,000.00

**Applicant: Bergen County Watershed Management Committee
c/o Bergen County Soil Conservation District
327 Ridgewood Avenue
Paramus, NJ 07652**

**Partner: Bergen County Department of Parks
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GRANT TRACKING

Affected Waterbody: Stream

Impairment: Moderate – on 303d list.

Start date of project: Spring 2002

Completion date of project: Spring 2002

NPS Category of Pollution: 4600 Erosion and Sedimentation

NPS Functional Category of Activity: 021Erosion Control Projects
504 Riparian Assessment / Monitoring

Description of Project

Van Saun Mill Brook is a moderately impaired stream, according to the 1998 Ambient Biological Monitoring Station AN 0211, downstream from the site. The impairment is mostly due to erosion and NPS pollution. The eroded area, located immediately south of the Van Saun Park entrance road from Forest Ave, has been subjected to severe erosion due to its location in a highly utilized public park. In the past, efforts were made to stabilize the stream banks with large concrete blocks. However, erosion has continued around the blocks, cutting into the stream banks and toppling several of the blocks into the water, resulting in the build-up of sediment in the stream and markedly reduced water flow into Walden Pond downstream from the site. By removing all the blocks, filling and regrading the streamside slopes, and stabilizing the banks with rip rap and gabion baskets, the erosion and sedimentation problem of this 100-foot section of Van Saun Mill Brook on the east bank, and the 50- foot section on the west bank should be reduced.

The Bergen County Watershed Management Committee and the Bergen County Dept. of Parks have considered options for restoring and stabilizing the stream banks of the proposed project. First consideration was given to revegetation. However, due to the severity of the drop from grade to stream level on both the eastern and western banks, stabilization with stream bank vegetation would not be practical. In addition, there is a bike/walkway parallel to Van Saun Mill Brook and only 18 feet from it. Immediately adjacent to this bike/walkway is a large parking lot. These asphalt structures leave

insufficient room to regrade the east bank to a gradual slope suitable for revegetation. On the western bank, trees grow right to the bank's edge, which would necessitate removal of several rows to regrade this bank to a gradual slope. Therefore, the use of gabion baskets and rip rap for stabilization seems the most practical way to reduce the severe erosion and restore water flow. Native shrubs can be planted on the top of the banks on both sides to further aid in reducing erosion, and will help to shield the gabion baskets and rip rap from view.

At the present time, the Bergen County Watershed Management Committee is planning stream bank restoration for 250 feet of Van Saun Mill Brook upstream from this proposed project, in the area of the park near the Carousel. Additionally, the Bergen County Parks Department is planning to dredge Walden Pond and the section of Van Saun Mill Brook downstream from this proposed project. Lastly, the Bergen County Parks Department is planning to construct facilities that will eliminate animal waste runoff to the stream from the zoo. Plans have been finalized, and this project will soon go out for bid.

All of these projects have the potential to upgrade the water quality of Van Saun Mill Brook in Van Saun County Park. The Bergen County Watershed Management Committee has been monitoring the water quality of the brook since the fall of 2000, with results consistently being poor to fair. The Committee will continue to monitor this brook in the park 3 to 4 times a year, so that improvement in water quality from the planned projects will be clearly documented.